



Electronic Medical Business Operations System (EMBOS)

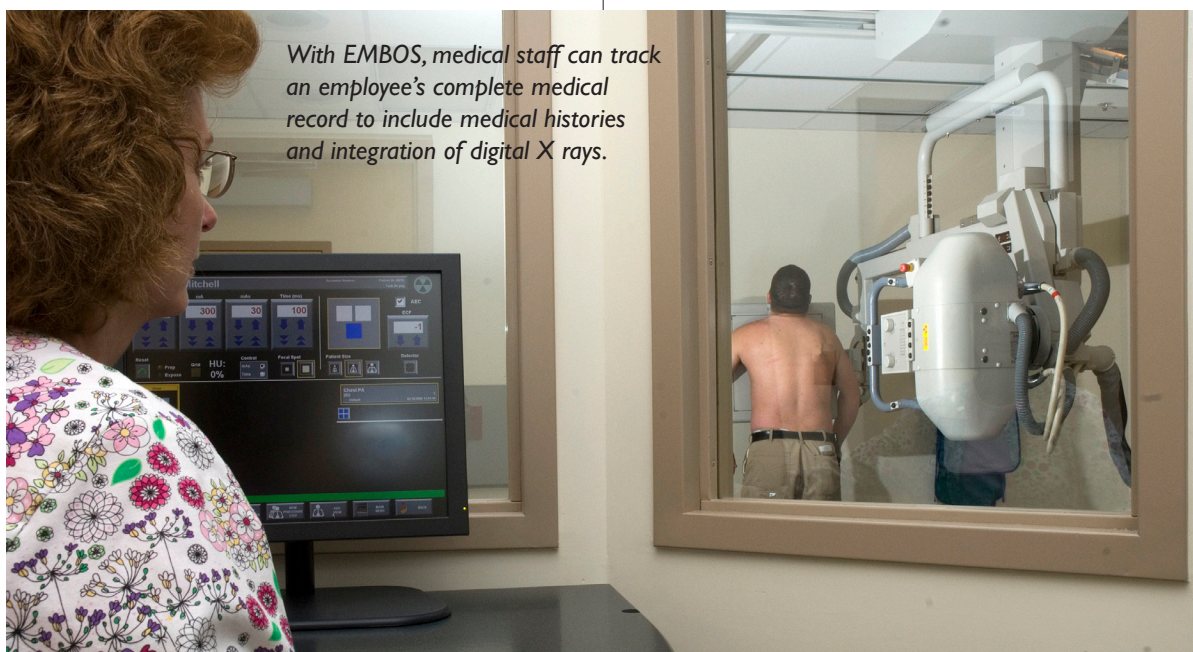
EMBOS is a state-of-the-art, web-enabled, comprehensive electronic medical record (EMR) system. It captures all patient data and the medical workflow, giving the medical provider a knowledge-based tool to support the health assessment process.

Because the volume of paper medical records is staggering and continues to grow, electronic records systems are becoming essential. In 2005 the White House announced support for developing electronic medical records across the federal government. In 2006, the U.S. Department of Energy issued 10 CFR 851 requiring all medical records be electronically available by 2015.

Y-12 is developing a comprehensive EMR that includes the requirements for an occupational health facility – requirements that are common across the Nuclear Weapons Complex. The EMR, known as EMBOS, will capture scheduling and workflow as well as data from medical surveillance, certification, and qualification examinations. This system will be Y-12's comprehensive solution to the DOE order, and it is available to the NWC, other government entities, and the private sector.

DATA TO BE TRACKED

- Patient demographics
- Physical examination data
- Employee medical histories
- Medical surveillance programs
- Patient and provider schedules
- Medical qualifications/certifications
- Non-occupational illness and injury visits
- Occupational recommendations (work restrictions)
- Return to work visits
- Digital x-rays
- Laboratory data
- Standardized abnormal lab notifications
- Standardized patient notifications
- Diagnosis
- Vital signs
- Immunizations
- Allergies
- Prescription medication tracking & dispensing
- Psychological data



Electronic Medical Business Operations System

EMBOS—a state-of-the-art, web-enabled, comprehensive electronic medical record (EMR) system.

The screenshot displays the EMBOS web application interface. At the top, there's a header for 'Y12 Occupational Health Services' and 'Electronic Medical Business Operations System (EMBOS)'. Below this, a navigation bar includes links like 'Schedules', 'Registration', 'Workstations', 'Patient Records', 'Medications', 'Questionnaire', and 'Exit'. The main content area is divided into several panels. On the left, there's a 'Patient Schedules' panel showing a calendar for January 2008. In the center, there's a 'Patient Case Workflow' panel with a table listing patients and their status. On the right, there's a 'Lab Test Results' panel showing a table of test results. The interface is designed for medical professionals to manage patient records and lab results.

CAPABILITIES

- Patient input capabilities for questionnaires
 - Medical Health History
 - Surveillance program
 - Psychological testing
- Targeted health assessments
- Case histories
- Patient/Provider scheduling
- Patient registration
- Patient workflow monitoring
- Laboratory interface & device integration
- Psychological evaluations
- Real-time data entry
- Coding: ICD-9/10
- Integration with PACS digital imaging capture devices
- Ad-hoc reporting
- Scanning capabilities (paper & x-ray)
- Reference data management
- Desktop integration
- Touch screen technology
- Voice recognition

STATUS OF CAPABILITIES

EMBOS V2.0 – production
EMBOS V3.0 – under development

SECURITY

- Encryption - Secure Socket Layer (SSL)
- IIS authentication
- SecurID – two factor authentication
- Oracle's Secure Application Roles

SOFTWARE ENVIRONMENT

- .Net Framework, C#, ASP.NET, PL/SQL
- Operating system – Windows 2003 Server
- Database – Oracle 10g

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YGG 08-0071R2

